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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,972	04/08/2002	Masatake Okumura	02224/HG	3315

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EXAMINER

POPOVICS, ROBERT J

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 06/20/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No. <u>10/089,972</u>	Applicant(s) <u>Okumura</u>
Examiner <u>Popovics</u>	Group Art Unit <u>1724</u>

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE Three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- ☒ Responsive to communication(s) filed on 4/24/03 (IDS)
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-11 is/are pending in the application.
- ☐ Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-11 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement

## Application Papers

- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some\* ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
- ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s): Dated 4/8/02 4/24/02
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other \_\_\_\_\_

Office Action Summary

Art Unit: 1724

## DETAILED ACTION

### *Claim Objections*

1. Claims 1-11 are objected to because the claims contain some minor grammatical errors, or instances of what appear to be literal translations that could be worded less awkwardly (e.g., *"to outside"* claim 1; *"are made to contact with"* claim 2). It is requested that Applicants review all pending claims for such wording. Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. With respect to claim 5, it is unclear how *"the solution is applied with small amplitude vibration,"* or what Applicants intend by this recitation.

### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 1-3 and 5-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Ban et al. (5,246,586). Ban discloses the adjustment of pH using  $\text{NaHCO}_3$  to charge particles in a ultrapure water system. With respect to claim 5, it is submitted that the action of pump 6 will result in "*small amplitude vibration.*" With respect to claim 3, it is submitted that the action of pump 6 will constitute application of a "*physical force to the fine particles.*"

***Claim Rejections - 35 USC § 103***

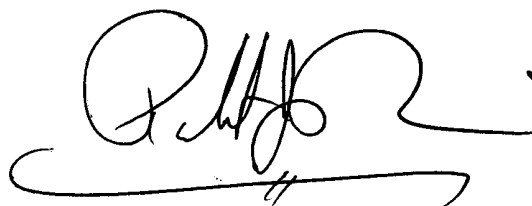
6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ban et al. (5,246,586). Claim 4 specifies "*a flow velocity of 0.5 m/sec to 2.0 m/sec.*" Ban is silent with respect to flow velocities. Absent a showing of unexpected results, or criticality specifically associated with the claimed range of flow velocities, the claimed range is submitted to constitute a parameter that would have been routinely optimized by one of ordinary skill in the art at the time the invention was made.

8. Any inquiry concerning this communication should be directed to Examiner Popovics at telephone number (703) 308-0684.

June 13, 2003



**ROBERT J. POPOVICS  
PRIMARY EXAMINER**